

# 4.2.9 Mohave County

### Geography

Mohave County is the second largest county in Arizona, located in the northwest corner it covers 13,479 square miles. The County is bisected in the northern portion by the Grand Canyon. Although a significant portion of the County lies within the Sonoran Desert, it also includes 186 square miles of surface water and 1,000 miles of shoreline. The climate is arid, but varies significantly from the northern Grand Canyon region to the southern desert region. The topography varies from flat desert ranges in the eastern portion to rolling, mountainous terrain and deep canyons in the western and northern areas.

### **Population**

A county containing only a small portion of Arizona's overall population (3%), the rate of the County's population growth outpaces that of the State. Between 2000 and 2005, Mohave County's population increased 21% to reach 188,035 residents, while Arizona's population rose 17.8% during this time. Several moderately sized communities exist including Bullhead City, Kingman, New Kingman/Butler, Colorado City, and the largest community in the County—Lake Havasu City. Identified as ideal recreational locations along the Colorado River, the towns of Bullhead City, Lake Havasu City, and New Kingman/Butler, in particular, are projected to experience sizeable population gains in the coming decades.

Jurisdiction	1990	2000	2005	2010	2020	2030	2040
Mohave County	93,497	155,032	188,035	221,443	281,668	330,581	367,952
Bullhead City	21,951	33,769	38,210	41,899	53,848	62,434	67,597
Colorado City	2,426	3,334	4,080	5,500	6,626	7,598	8,321
Ft Mojave Reservation	454	773	N/A	N/A	N/A	N/A	N/A
Hualapai Reservation	822	1,353	N/A	N/A	N/A	N/A	N/A
Kaibab Paiute Reservation	165	196	N/A	N/A	N/A	N/A	N/A
Kingman	13,208	20,069	25,860	25,225	29,277	32,973	35,863
Lake Havasu City	24,363	41,938	53,435	58,777	68,886	78,550	86,399

Source: Arizona Department of Commerce, May 2003; Arizona Department of Economic Security, February 1997.

## **Economy & Labor Force**

Of the County's 87,268 civilian labor force, 13% work in trade and 11% in the service industries. Year-round outdoor recreational activities along the Colorado River have fostered these employment sectors. In addition, a growing retirement population, both seasonal and year-round, has increased the need for medical services. A substantial share of the remaining jobs are contained in the government and construction sectors. In 2005 the unemployment rate was 4%, slightly lower than the statewide average of 4.6%.

#### **Historic Hazard Events**

During the development of the original State of Arizona All-Hazard Mitigation Plan, a list of historic hazard events was complied. Most counties researched local records and governmental databases to update and add records of recent hazards to the state compiled list for use in their plans. Additional hazard records were researched using the same criteria, with the exception that all damages greater than \$1 were included. Therefore, due to the variety of data sources and criteria, it should be kept in mind that the numbers reported reflect the availability of such data from those sources and the numbers are expected to under-predict the losses actually sustained over the past 30 to 40 years. A more thorough search for historic data in future planning efforts is mentioned in the county plans and encouraged by ADEM.

It is our hope that this data coupled with other risk assessment information will prove to be instrumental in assisting the County and State in future planning and mitigation efforts. We believe this can happen by this data accurately indicating which hazards we are most susceptible to; how damaging these hazards can be to us; and the damage costs or costs avoided through future mitigation projects.



Historic Record of Disaster Events in Mohave County 1966-2003						
	Declaration			Total		
Event Type	State Presidential None		Deaths/Injuries	Damage (\$)		
Drought	2					
Flooding/Flash Flooding	13	8	37	1/121	9,500,000	
Thunderstorms/High Winds	1		66	0/14	3,774,000	
Tornadoes/Dust Devils	1		11	0/4	563,000	
Wildfires	12					
Winter Storms	2				·	

Source: Mohave County Multi-Jurisdictional Hazard Mitigation Plan

Note: Other disaster events were profiled in the Plan, however, the date ranges varied and went back to the 1800's. For the sake of relevance, we used the date range for the County's declarations (1966-2003) for the undeclared as well. The data should be considered approximate rather than exact.

#### Vulnerability

The County includes both a modest number and moderate proportion of population that is potentially vulnerable to hazards. With a relatively aged population base, only 22.5% of the County's residents are under 18 years of age, while 20.8% are over the age of 65.

Mohave County Populations Potentially Vulnerable to Hazards, 2005							
Jurisdiction	Population						
Total Under 18 yrs 65+ years Below Poverty Let							
Arizona	6,044,985	1,607,966	773,758	840,253			
Mohave County	188,035	42,308	39,111	28,017			
As a % of County	100%	22.5%	20.8%	14.9%			
As a % of State	3.1%	2.6%	5%	3.3%			
Source: Estimates based on US Census Bureau data, 2007. Poverty Level as defined by US Census Bureau.							

Mohave County Dwelling Units Potentially Vulnerable to Hazards, 2005					
	Housing Units				
Jurisdiction	Total	Built Before 1970			
Arizona	2,544,806	490,710			
Mohave County 94,768 8,544					
Source: Estimates based on US Census Bureau. Data, 2007.					

#### **Hazards & Mitigation Strategy**

Using the results of the County's vulnerability and capability analysis and the goals and objectives, a list of actions/projects was formulated. The actions/projects were then evaluated and ranked using the STAPLEE procedure. Below are the top ranking identified hazards and their actions/projects as indicated in the County's Hazard Mitigation Plan approved by FEMA on July 29, 2005:

### Flood/Flash Flooding

Action 1: Develop/expand the County's flood detection (flood warning) system. This includes the installation of new ALERT precipitation and stage gages, repeaters and possibly additional base station(s) and software. The system would add a county-wide benefit (incorporated and unincorporated) in the areas of public safety and emergency response.

Action 2: complete floodplain mapping of unincorporated areas adjacent to Coconino and Yavapai county borders.

### Thunderstorms/High Winds

Action 1: Develop an overall county government continuity plan, with site-specific plans for each critical facility. Upgrade facilities where necessary with emergency power, communication and security systems.

#### Wildfires

Action 1: Require, within the limits of state statute, or actively encourage by county resolution the inclusion of new residential and commercial developments bordering existing fire districts.

Action2: Form new districts encompassing large remote developments.



### Mitigation Strategy Progress

Through development of this Plan, the need to significantly refine the goals/objectives and actions/projects in our original Plan was evident. We believe this need is a result of the determination to focus the Plan more on natural caused hazards as other hazards are covered in their appropriate plans (i.e. health, terrorism, etc.). There is also much to be said about the increased amount of information available regarding hazard mitigation planning.

To encourage our jurisdictions to re-evaluate their Plan's Mitigation Strategy as well, each County was asked to indicate their action/project progress since the development of their Plan. In response to our request, the County provided the information below in June 2007:

Action/Project Name	Action# in Current Plan	Hazard Mitigated	Progress Summary
Radio Interoperability	Co Goal #1	All	3 fixed interop sites completed or nearing completion covering major population areas, 1 mobile unit operational.
Colorado River Emergency Plan	Co Goal #2	All	Initial draft plan developed & joint meetings held with river communities & neighboring counties; additional working sessions planned.
Telephone Public Notification System	Co Goal #3	All	Obtained homeland security funding to purchase system early in 2007; installation in progress.
Flood Detection Warning System	Co Goal #6	Flood	Added 40 ALERT sensor stations since 2004 and expanded coverage to many rural areas.
Co Government Continuity Plan	Co Goal #9	All	Plan development procedure formalized this year, departmental planning scheduled for 2 <sup>nd</sup> half of 2007.
Repetitive Loss Property Buyout	Co Goal #10	Flood	A buyout & associated move affecting 250 properties in Mohave Wash areas was recently accomplished.
Develop Master Drainage Plans	Co Goal #12	Flood	In progress with aerial surveys being flown and \$1 million budgeted annually for development.
Local Drought Impact Group	Co Goal #13	Drought	Initial meetings on forming an LDIG are in progress with ADWR with full start-up scheduled for 2 <sup>nd</sup> half of 2007.
Fire Protection	Co Goal #4	Wildfire	In June 2007, obtained \$80,000 BLM grant to develop countywide Community Wildfire Protection Plan (CWPP).

### Other Planning Mechanisms

During their planning process, the County staff reviewed and evaluated their resources and capabilities in the areas of Existing Plans, Policies and Ordinances; Technical Staff/Resources and Financial Resources. Although all resources are important to a community's ability to mitigate the effects of natural and human-caused hazards, we elected to ask the County to complete a survey indicating their legal and regulatory resources to be included in the Plan. We are pleased to receive feedback that reflects awareness of the need for regulations and guidelines that may have an effect on loss reduction. We believe such resources and capabilities can play a critical part in developing and maintaining a more disaster resistant community. The information below was provided by the County in June 2007:

	Yes or	Last Approval	Responsible		
Plan/Policy/Ordinance	No	Date	Authority	Plan Use/Comments	
Building Code	Υ	11/2005	Bldg Inspector	N/A	
Zoning Ordinance	Υ	12/2005	Zoning Inspector	N/A	
Subdivision Ordinance or Regulations	Υ	3/2001	Planning & Zoning	N/A	
Site Plan Review Requirements	Υ	1992	Planning & Zoning	N/A	
General or Comprehensive Plan	Υ	12/2005	Planning & Zoning	N/A	
Capital Improvement Plan	Υ	Annual	Finance Dept.	N/A	
Emergency Response Plan	Υ	2007	County EM	EOP also called ERRP	
Post-Disaster Recovery Plan	Υ	2007	County EM	Most covered in EOP, no sep	
				plan	
Real Estate Disclosure Statement	N	N/A	N/A	ADRE req's apply. No Co plan.	
Source: Survey from ADEM to County Emergency Managers, 2007.					





